

**REMARKS/ARGUMENTS**

In the Office Action dated June 18, 2003, the Examiner: (1) objected to the Title; (2) rejected claim 1 as anticipated by Mulvihill (U.S. Pat. No. 6,516,370; and (3) rejected claims 2-25 as obvious over Mulvihill in view of Sicola (U.S. Pat. No. 5,938,776). Applicants changed the Title as indicated above. Applicants also traverse the claim rejections for the reasons provided below. Applicants respectfully request reconsideration and allowance of the pending claims.

Claim 1 is directed to a configurable storage array having, among other features, a plurality of input/output connectors coupled to a segmentable bus. The storage array also comprises "control logic adapted to determine an arrangement of connectors coupled to the input/output connectors and configure the segmentable bus to define a plurality of storage device arrays based on the arrangement."

Mulvihill is directed to a data storage system that has "redundancy arrangements to protect against a total system failure in the event of a failure in a component or subassembly of the storage system." Col. 1, lines 5-10. The Examiner referred to Figure 2 of Mulvihill as well as passages in columns 4 and 5 as allegedly containing subject matter that anticipates claim 1. Applicants do not view that Figure 2 or the referenced passages of columns 4 and 5 as teaching or even suggesting the claimed control logic. Mulvihill does not at all disclose "control logic adapted to determine an arrangement of connectors coupled to the input/output connectors and configure the segmentable bus to define a plurality of storage device arrays based on the arrangement." Further, Applicants do not all understand how the Examiner believes the cited passages or any other part of Mulvihill is even remotely suggestive of the invention of claim 1. Applicants respectfully request clarification if the Examiner intends to continue rejecting claim 1. At least for the foregoing reason, claim 1 is not anticipated by Mulvihill.

In the event the Examiner has misunderstood the subject matter of claim 1 and without limiting the scope of claim 1 in any way, Applicants respectfully make reference to Applicants' disclosure. The following discussion is provided simply by way of an exemplary, non-limiting explanation. Referring to Figure 3 of

Applicants' disclosure, for example, a plurality of I/O connectors 70-76 are shown coupled to a control board 130. One or more cables 25, 35 and 45 may be connected to one or more of the I/O connectors in a variety of configurations. The control board also comprises control logic 170 that is described determining how the cables (which themselves have connectors) are arranged with regard to the I/O connectors. Based on the determined arrangement determined by the control logic, the control logic configures the segmentable bus 140 to define a plurality of storage device arrays that comprise the storage devices 60. Thus, storage devices in array 180 may be configured to be accessed through cable 25 while the storage devices in arrays 190 and 200 may be configured to be accessed through cables 35 and 45, respectively. The example of Figure 3 thus illustrates how the storage devices can be operatively divided into three isolated arrays 180, 190, 200 based on the arrangement of the cables 25, 35, 45 with respect to the I/O connectors 70-76.

The Examiner also used Sicola in the Office Action, although not with regard to claim 1. Sicola is generally directed to a SCSI subsystem that has mixed "wide" and "narrow" SCSI devices installed. The subsystem can detect, for example, whether a narrow SCSI device is illegally installed in a slot assigned to a wide SCSI device. See Abstract of Sicola. Sicola does not appear to teach or suggest control logic that determines an arrangement of connectors coupled to I/O connectors and that configures the segmentable bus to define a plurality of storage device arrays based on the arrangement as is required by claim 1. As such, neither Mulvihill nor Sicola teaches nor suggests the control logic of claim 1. Thus, claim 1 is neither anticipated by nor rendered obvious by Mulvihill and/or Sicola. Claims 2-14 depend on or from claim 1 and are allowable at least for the same reason as claim 1.

Claim 15 is directed to a method that comprises determining an arrangement of connectors coupled to input/output connectors of a storage array and grouping subsets of the storage device onto isolated bus segments based on the arrangement of the connectors. Neither Mulvihill nor Sicola teaches or suggests this combination of actions. The Examiner explicitly concedes that

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Mulvihill does not disclose the claimed "grouping," but refers to columns 7 and 8 of Sicola for that limitation. Applicants do not find any teaching or suggestion in columns 7 and 8 of Sicola of grouping subsets of storage device onto isolated segments based on the arrangement of connectors. At least for this reason, claim 15 and its dependent claims are allowable over the Mulvihill and Sicola.

Claim 15 was amended merely to correct an inadvertent typographical error. The words "configuring a" were inadvertently included in the originally submitted claims and have been removed by amendment. This amendment does not narrow the scope of claim 15.

Claim 25 is directed to an apparatus comprising a means for determining an arrangement of connectors coupled to I/O connectors of a storage array and a means for grouping subsets of the storage devices onto isolated bus segments based on the arrangement of connectors. At least for the reasons provided above, claim 25 is allowable over Mulvihill and Sicola.

Claim 25 was amended merely to correct an inadvertent typographical error. The words "configuring a" were inadvertently included in the originally submitted claims and have been removed by amendment. This amendment does not narrow the scope of claim 25.


In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Hewlett-Packard Company Deposit Account Number 08-2025 and enter any time extension(s) necessary to prevent this case from being abandoned.

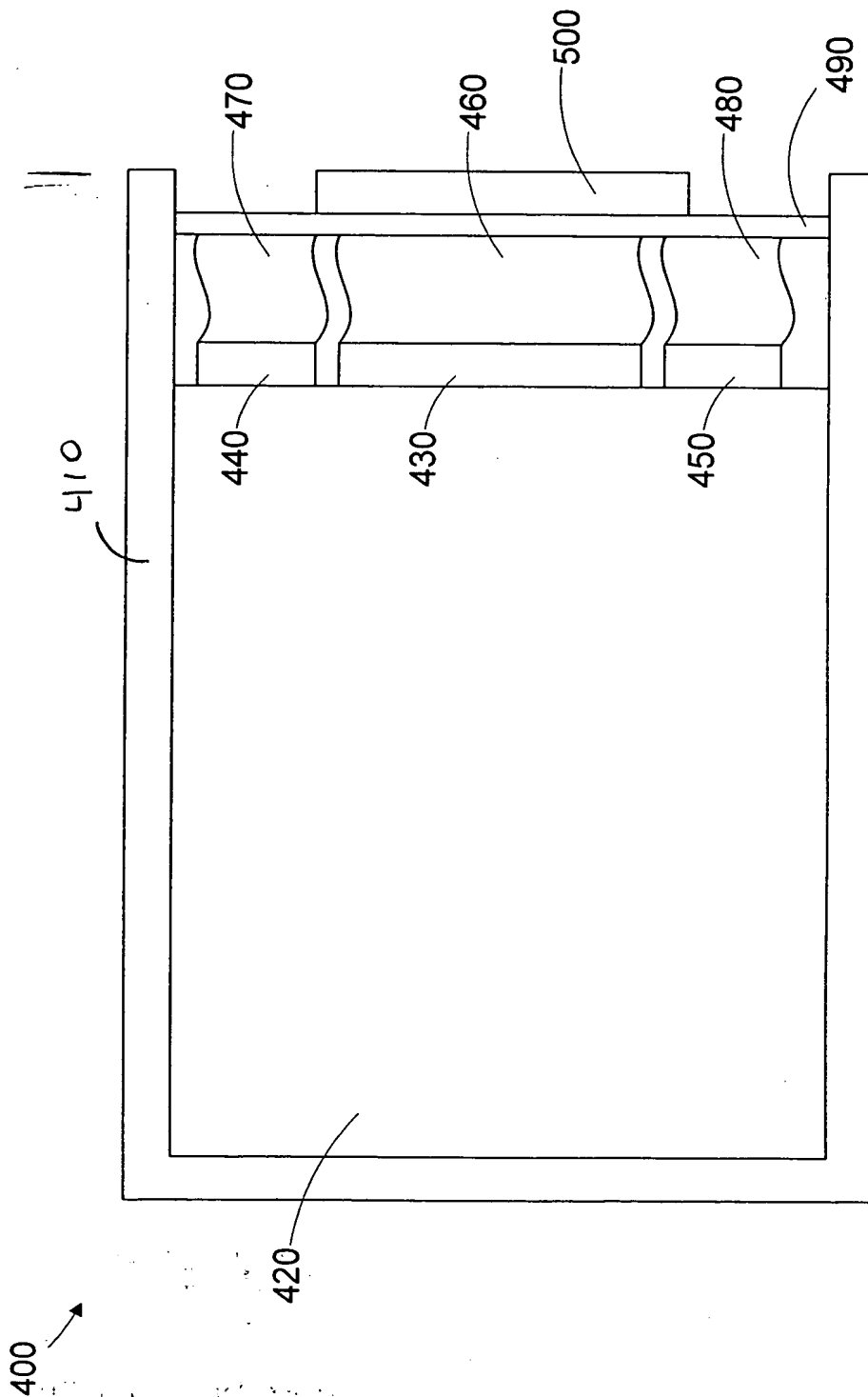
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Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

  
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**Figure 4**